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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,583	03/01/2004	David Wiekhorst	65823-0540	9881

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EXAMINER

LEE, JINHEE J

ART UNIT	PAPER NUMBER
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2831

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/790,583

Applicant(s)

WIEKHORST ET AL.

Examiner

Jinhee J. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 77-129 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 77-85, 115 and 120-129 is/are allowed.
- 6) ☒ Claim(s) 86-98 and 116 is/are rejected.
- 7) ☒ Claim(s) 99-114 and 117-119 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) *
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: See Continuation Sheet.

Continuation of Attachment(s) 6). Other: allowable subject matter, not accepted drawing.

DETAILED ACTION

Election/Restrictions

1. Claims 121 and 124 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group, there being no allowable generic or linking claim. Election was made **without** traverse in Paper number 0205.

Applicant has stated in remarks dated 7/20/05 that "claims 121 and 124 are not readable upon the elected species".

1. Claim 77 is allowable. The restriction requirement for species, as set forth in the Office action mailed on 11/17/04, has been reconsidered in view of the allowability of claims to the elected invention pursuant to MPEP § 821.04(a). **The restriction requirement is hereby withdrawn as to any claim that requires all the limitations of an allowable claim.** Claims 121 and 124, directed to a cable of non-elected species are no longer withdrawn from consideration because the claim(s) requires all the limitations of an allowable claim.

In view of the above noted withdrawal of the restriction requirement, applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Once a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

Drawings

2. The amended drawing filed 6/26/06 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

Separator on replacement figure 6A is new matter and was not previously disclosed in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant is required to cancel the new matter. The original specification does not specify separator being a layer completely surrounded by the core.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect may be deferred until after the examiner has considered the proposed drawing correction. Failure to timely submit the proposed drawing correction will result in the abandonment of the application.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 86-893, 95-98 and 116 are rejected under 35 U.S.C. 102(e) as being anticipated by Glew et al. (US 6639152).

Re claim 86, Glew et al. discloses a cable comprising:

a plurality of twisted pairs of conductors; and

a jacket within which the plurality of twisted pairs (130 for example) of conductors are located, the jacket defining interior air channels (122 for example), the plurality of twisted pairs of conductors being exposed to air within the air channels, the interior air channels defining legs thereinbetween that project inwardly toward a central axis of the jacket, the legs being attached to the jacket at outer ends and the legs having free, unattached inner ends, each channel having two opposing sides, a side interconnecting the two opposing sides, wherein the side interconnecting the two opposing sides forms discretely identifiable corners with the opposing sides, and an open side that faces inwardly toward a the central axis of the jacket, the channels having lengths that run along a length of the jacket, and the number of channels being greater than the number of twisted pairs of conductors (see figure 1B).

Re claim 87, Glew et al. discloses a cable, wherein the twisted pairs of conductors include 4 twisted pairs of conductors (see figure 1B).

Re claim 88, Glew et al. discloses a cable, wherein each of the conductors of the plurality of twisted pairs of conductors is covered by a separate insulation layer.

Re claim 89, Glew et al. substantially discloses a data transmission cable comprising:

a four or fewer twisted pair of data transmission conductors; and

a jacket (171 for example) within which the four or fewer twisted pairs of data transmission conductors is located, the jacket defining interior channels (unnumbered) that are circumferentially spaced relative to one another about the four or fewer twisted pairs of data transmission conductors, the channels defining legs thereinbetween that project inwardly toward a central axis of the jacket, the legs being attached to the jacket at outer ends and the legs having free, unattached inner ends, the channels each having an open side (unnumbered) that faces inwardly toward the central axis of the jacket, the four or fewer twisted pairs of data transmission conductors being exposed to gas within the interior channels, the four or fewer twisted pairs of data transmission conductors generally not occupying the channels (see figure 1B).

Re claims 90, note that the device of Glew et al. teaches, wherein the four or fewer twisted pairs of conductors includes 4 twisted pairs of conductors (see figure 1B).

Re claims 91, note that the device of Glew et al. teaches, wherein each of the conductors of the four or fewer twisted pairs of data transmission conductors is covered by a separate insulation layer.

Re claim 92, note that Glew et al. teaches, wherein number of channels is greater than the number of twisted pairs (four) of data transmission conductors (see figure 1B).

Re claims 93, Glew et al. discloses wherein the channels are generally rectangular in cross-sectional shape.

Re claim 95, note that Glew et al. discloses, wherein the cable includes an inner portion surrounding the four or fewer twisted pairs of data transmission conductors and an outer portion surrounding the inner portion, the inner portion including the channels such that a composite density of the inner portion is less than a composite density of the outer portion (see figure 1B).

Re claim 96, the cable of Glew et al. discloses wherein a signal speed at the inner portion is at least 2% greater than a signal speed at the outer portion (inherent).

Re claim 97, the cable of Glew et al. discloses wherein a signal speed at the inner portion is at least 5% greater than a signal speed at the outer portion (inherent).

Re claim 98, the cable discloses wherein a signal speed at the inner portion is at least 10% greater than a signal speed at the outer portion (inherent).

Re claims 116, Glew et al. discloses wherein the channels are generally rectangular in cross-sectional shape.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 94 is rejected under 35 U.S.C. 103(a) as being unpatentable over Glew et al.

Re claim 94, the cable of Glew et al. discloses the claimed invention except, wherein each of the channels has a cross-sectional area less than about 30 percent of a total cross-sectional area of the jacket. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have each of the channels with a cross-sectional area less than about 30 percent of a total cross-sectional area of the jacket in order to optimize insulation, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *Peterson*, 315 F.3d at 1330, 65 USPQ2d at 1382.

Response to Arguments

9. Applicant's arguments with respect to claims 86-98, 116 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

10. Claims 99 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. Claims 100-114, 117-119 are have drawing objections to overcome.

12. Claims 77-85, 115, 120-129 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: Re claims 77-85, 115, 120-129, prior arts do not teach or suggest the combination of a cable with a plurality of twisted pairs of conductors, a jacket defining a central passage in which the plurality of twisted pairs of conductors is located, wherein the channels having two opposing sides with the number of channels being greater than the number of twisted pair of conductors

Re claim 99, prior arts do not teach or suggest the combination of a cable with four or fewer twisted pairs of data transmission conductors are twisted around each other to define a core having diameter less than about .25 inches.

Re claim 100-103, 117, prior arts do not teach or suggest the combination of a data transmission cable with four or fewer twisted pairs of data transmission conductors, a jacket defining an interior passage, the air in the central region occupying a volume

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between the four or fewer twisted pairs of conductors within, the number of channels being greater than the number of twisted pairs.

Re claim 104-114, 119, prior arts do not teach or suggest the combination of a cable with four or fewer twisted pairs of data transmission conductors, a jacket defining an interior air passage that extends along a length of the jacket, the core being located within the central region, the peripheral region including a plurality of channels, the number of channels being greater than the number of twisted pairs.

Conclusion

2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

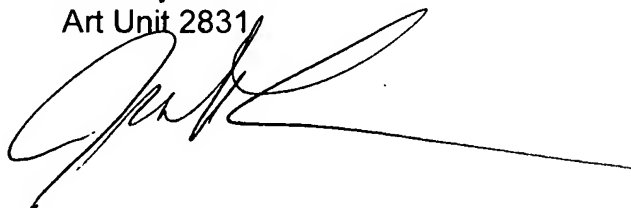
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jinhee J. Lee whose telephone number is 571-272-1977. The examiner can normally be reached on M, T, Th and F at 6:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean A. Reichard can be reached on 571-272-2800 ext. 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jinhee J Lee
Primary Examiner
Art Unit 2831

A handwritten signature in black ink, appearing to be 'Jinhee J. Lee', written over the printed name and title.



Inventor: WIEKHORST ET AL.
Docket No.: 2316.1910USC1
Title: COMMUNICATION WIRE
Serial No.: 10/790,583
REPLACEMENT SHEET

FIG. 6A

Not Approved
by
Examiner
[Signature]
9/28/06

